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JAPANESE PATENT OFFICE

PATENT ABSTRACTS OF JAPAN

(11) Publication number: **11214008 A**

(43) Date of publication of application: **06 . 08 . 99**

(51) Int. Cl.

**H01M 4/60**  
**H01M 4/02**  
**H01M 10/39**  
**H01M 10/40**

(21) Application number: **10015856**

(22) Date of filing: **28 . 01 . 98**

(71) Applicant: **MATSUSHITA ELECTRIC IND CO LTD**

(72) Inventor: **TONOMURA TADASHI**

**(54) COMPOUND ELECTRODE, MANUFACTURE THEREOF, AND LITHIUM SECONDARY BATTERY**

(57) Abstract:

**PROBLEM TO BE SOLVED:** To provide an electrode in which redox reaction quickly proceeds even at a room temperature without losing high capacity of elemental sulfur, high energy density characteristic by including an organic sulfur compound having at least one thiol group or thiolate group, polyaniline and elemental sulfur in a molecule.

**SOLUTION:** An organic sulfur compound having a thiol group or thiolate group in a molecule is dissolved in

N-R-2-pyrrolidone (R is hydrogen atom or an alkyl group) to obtain a solution (a), and polyaniline powder is added and mixed with the solution (a), and furthermore elemental sulfur powder is added and mixed with the solution (a) to obtain a slurry. This slurry is applied on a conductive base, and this conductive base is heated in a vacuum or an inert gas atmosphere to produce a compound electrode. As a polyaniline, a material obtained by polymerizing aniline or a derivative thereof with chemical polymerization or electrolytic polymerization is used. Especially, reducible polyaniline in a de-doped condition is effective.

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*organic third copolymer  
polyaniline*

*A (1-5)  
qualifies no  
102(b) art*

*has everything in pos. elec.  
except Li alloyed w/ S*

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